

(Model.)

E. KUHNS.
SASH FASTENER.

No. 263,536.

Patented Aug. 29, 1882.

Fig. 1.

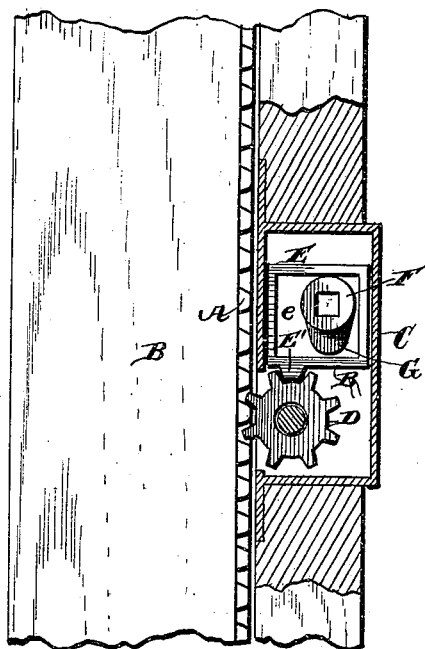


Fig. 2.

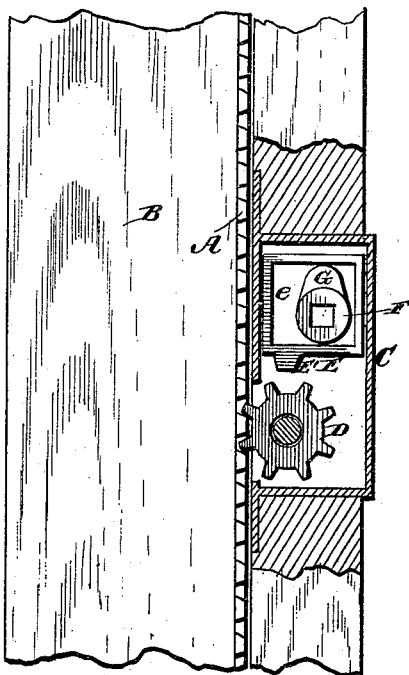
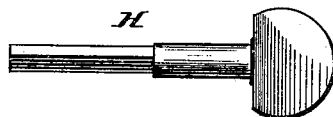


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

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SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 263,536, dated August 29, 1882.

Application filed April 28, 1881. (Model.)

To all whom it may concern:

Be it known that I, EDWARD KUHNS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in Sash-Locks, of which the following is a specification.

This invention relates to that class of window-sash fasteners in which the sash is held at any desired height by bringing a stop or pawl into engagement with a pinion which engages in a series of slots or a rack upon the sash, whereby the rotation of the pinion is prevented and any downward movement on the part of the sash checked until after the stop or pawl has been released from the pinion.

Heretofore in a sash-fastener of such character a pawl for engaging the pinion has been pivoted below the latter, a cam-projection upon a spindle arranged within an opening in the pawl below its pivotal point for oscillating the same, and a spring located between the rack on the sash and the pivoted pawl and adapted to bear against the upper part of the front edge of the latter, so as to normally throw the pawl back against an abutment and bring it in engagement with the pinion. In a sash-fastener of such character it becomes necessary to turn the pawl against the spring, so as to release the pawl from the pinion, and thereby allow the latter to rotate freely, so as to admit of the descent or the ascent of the sash; and it also becomes necessary to hold the pawl in such disengaged position by grasping and holding the spindle carrying the cam-projection, since the moment the same is released the spring will throw the pawl back against the abutment and into engagement with the pinion. The most serious objection, however, to such arrangement is that while the abutment will hold the pawl and prevent the rotation of the pinion in one direction, so as to hold the sash up at any desired height, yet it will not prevent the sash from being raised, since in lifting the sash the rack-bar, acting on the pinion, will turn the latter so as to swing the pawl forward away from the abutment and against the spring, whereby the pawl will then ride over the teeth of the pinion.

It is the principal object of my invention to remedy this defect and to so construct and ar-

range the stop device for engaging the pinion that when it is brought into engagement therewith it will lock and hold the pinion positively against rotation in either direction, so that while the sash can be held up at any desired height, as heretofore, it can also by the same means be locked when completely down, or be locked when raised at any desired height above the sill—as, for example, the sash can be locked an inch or two above the sill with perfect security.

Another advantage incident to my improved construction is that, while capable of the functions just mentioned, the device for locking the pinion can be held away from the pinion without necessitating further attention or manipulation than to disengage it.

Other incidental advantages are simplicity, cheapness, strength, and accuracy of operation.

In the annexed drawings, which illustrate my invention, Figure 1 represents a fragment of a window-frame with a portion of the sash and frame in section and the cap-plate of the lock-case removed, the pinion in this case being locked. Fig. 2 represents a section of the sash and frame with my improvement applied and the bolt disengaged and held away from the pinion. Fig. 3 shows the removable key.

In the present instance the rack A is applied to the edge of the sash B, and the lock-case containing the pinion and bolt is fitted within a mortise in the window-frame. The lock-case C will be provided with a suitable covering-plate, which in the drawings is removed, so as to show the sash holding and locking devices.

D indicates the rotary pinion, and E the vertically-reciprocating bolt, both of which are arranged within the lock-case, the bolt being shown located above the pinion. The bolt E, which slides vertically within the lock-case, is guided by the vertical walls of the same, and upon its end which is next to the pinion it is formed or provided with a catch or projection, E', adapted to engage the pinion, so as to hold the same. It will be evident from this construction and arrangement that when the bolt is engaged with the pinion the latter will be positively locked and cannot be turned in either direction, since, as the bolt is capable of a vertical sliding movement only, any tendency of the pinion to rotate will simply cause the

bolt to bind against one of the vertical walls of the lock-case. Hence the sash can be held at any desired height and locked against further up or down movement; or it can by the same means be held and locked when lowered and seated upon the sill. The bolt has a central polygonal-shaped opening, *e*, within which is arranged a rotary hub, *F*, having a laterally-projecting dog or cam-finger, *G*, designed to operate the bolt and also to hold the same either down or up, if desired. The hub fits and works in an opening formed in both the lock-case and its covering-plate, and has an opening, preferably rectangular in cross-section, for receiving the correspondingly-formed shank of the key *H*, by means of which the hub can be turned in either direction. The area of the opening in the bolt is sufficient to allow the hub and its cam-projection to make at least one half-revolution, and also so that when the cam-projection assumes the vertical position shown in Fig. 1 the extremity of the cam-projection shall be nearly in contact with the lower side of the opening in the bolt. When the bolt is located above the pinion it can be raised and disengaged therefrom by inserting the key in the hub and turning the same, so that the cam projection shall act against the upper side of the opening in the bolt and raise the latter into the position shown in Fig. 2. The key can then be withdrawn and the bolt will be upheld by the cam-projection, thus allowing the sash to be freely raised or lowered. As soon, however, as the hub is turned so as to release its cam-projection from contact with the upper side of the opening in the bolt the latter will drop by gravity and engage the pinion, the cam-projection then assuming the position shown in Fig. 1, in which position it will lock

down the bolt. This affords additional security against the bolt being accidentally raised, although, as heretofore stated, any attempt to now turn the pinion will simply cause the bolt to bind against one side of the lock-case, and hence prevent rotation of the pinion.

Having thus described my invention, what I claim is—

1. The combination, in a sash-fastener, of the pinion for engaging a rack or seat on the sash with a sliding and vertically-guided reciprocating bolt adapted to engage and lock the pinion, and formed with an opening in which is located a cam adapted to be turned so as to act against the walls of the opening, and thereby operate the bolt and bring it into engagement with the pinion, so as to lock the sash at any desired position, and thereby prevent the sash from being raised or lowered, substantially as described.

2. The combination, in a sash-fastener, of the rack applied to the sash, and the pinion located within a lock-case secured to the window-frame, with the sliding bolt for engaging and locking the pinion, guided in its vertical movement by the walls of the lock-case, and the rotary hub adapted to receive a key, and provided with a laterally-extending cam-projection, said hub, with its cam-projection, being located within an opening in the bolt, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD KUINS.

Witnesses:

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THEODORE PELTN